

ABSTRACT

A distortion compensator that compensates for distortion arising in a main amplifier 10 that amplifies a signal effectively compensates for third order distortion which is unbalanced between the higher frequency band and lower frequency band. An amplitude detector 3 detects the level of a signal subject to amplification and a signal level change direction detection means 7 detects the direction of change in the level of the signal. A signal level change control means 4-8 stores the correspondence between the signal level and the mode of changing the signal in order to compensate for distortion for when the direction of change in the signal level is positive and when it is negative, and controls a signal change means 9 so that the amplitude and phase of the signal is changed in a mode of changing the signal corresponding to the detected direction of change in the signal level and the detected signal level. A signal change control content updating means 11-13 updates the content of this correspondence so that the distortion contained in the signal after amplification is reduced.